AMENDMENTS TO THE CLAIMS

1-37. (canceled)

38. (currently amended): A transgenic mouse comprising a panel of expression cassettes, ~~said panel comprising~~ said transgenic mouse produced by a method comprising the steps of

introducing a first expression cassette comprising a first control element derived from a first stress-inducible gene into a mouse at an embryonic stage ~~selected from the group consisting of DNA-dependent PK, DNA repair genes, GADD45, FOS, XHF, GADD153, TRE, p53RE response elements, JNK, p38, HO, GRP78, HSP70, metallothionein IIA (MTIIA), c-jun (JUN), FOS, heme oxygenase (HMO), cytochrome P450 1A1 (CYP1A1), glutathione S-transferase Ya subunit (GST Ya), aldehyde dehydrogenase (ALDH1), IL-1 alpha, IL-1 beta, TNF-alpha, G-CSF, GM-CSF, IL-3, IL-6, IL-8, IL-10, ICAM-1, tyrosine hydroxylase (TH), dopamine beta-hydroxylase (DBH), ornithine decarboxylase (ODC), and a gene containing a response element selected from the group consisting of thyroid hormone response element (ThRE), NFkBRE, XRE, retinoic acid response element (RARE), peroxisome proliferation response element (PPRE) and estrogen response element (ERE),~~ said control element operably linked to sequences encoding a first light generating polypeptide, and

introducing a second expression cassette comprising a second control element derived from a second stress-inducible gene into said mouse at an embryonic stage, ~~selected from the group consisting of DNA-dependent PK, DNA repair genes, GADD45, FOS, XHF, GADD153, TRE, p53RE response elements, JNK, p38, HO, GRP78, HSP70, metallothionein IIA (MTIIA), c-jun (JUN), FOS, heme oxygenase (HMO), cytochrome P450 1A1 (CYP1A1), glutathione S-transferase Ya subunit (GST Ya), aldehyde dehydrogenase (ALDH1), IL-1 alpha, IL-1 beta, TNF-alpha, G-CSF, GM-CSF, IL-3, IL-6, IL-8, IL-10, ICAM-1, tyrosine hydroxylase (TH), dopamine beta-hydroxylase (DBH), ornithine decarboxylase (ODC), and a gene containing a response element selected from the group consisting of thyroid hormone response element (ThRE), NFkBRE, XRE, retinoic acid response element (RARE), peroxisome proliferation response element (PPRE) and estrogen response element (ERE)~~, said second control element operably linked to sequences encoding a second light generating polypeptide and said second control element derived from a different stress-inducible gene than said first control element~~,~~

~~wherein said expression cassettes have been introduced into said transgenic mouse or an ancestor of said transgenic mouse, at an embryonic stage~~.

39. (canceled)

40. (previously presented): A method of determining the effect of an analyte on gene expression mediated by control elements derived from stress-inducible genes, wherein said expression is in a living transgenic mouse, said method comprising

administering the analyte to a living transgenic mouse of claim 38, wherein administering of said analyte is carried out under conditions that permit light generation mediated by said light generating polypeptide in the transgenic mouse,

determining the effect of the analyte on expression of the light generating polypeptide in a living transgenic mouse wherein said expression is mediated by at least one of the control elements.

41. (previously presented): The method of claim 40, wherein said conditions that permit light generation mediated by the light generating polypeptide includes administering, to the transgenic mouse, at least one substrate for the light generating polypeptide.

42. (canceled)

43. (previously presented): The method of claim 40, wherein the expression cassettes of said transgenic mouse comprise control elements derived from stress-inducible genes, and said analyte is screened for its affect on expression of stress-inducible genes.

44. (canceled)

45. (previously presented): A noninvasive method for detecting a level of expression in response to an analyte, wherein said expression is (i) mediated by control elements derived from stress-inducible genes, and (ii) in a living transgenic mouse, said method comprising

(a) administering the analyte to a living transgenic mouse of claim 38, wherein administering of said analyte is carried out under conditions that permit light generation mediated by said light generating polypeptide,

(b) placing the transgenic mouse within a detection field of a photo detector device,

(c) maintaining the transgenic mouse in the detection field of the device, and

(d) during said maintaining, measuring photon emission from the transgenic mouse with the photo detector device to detect the level of expression of the light generating polypeptide in the living transgenic mouse wherein said expression is mediated by at least one of the control elements.

46. (previously presented): The method of claim 45, further comprising,
(e) repeating steps (b) through (d) at selected intervals, wherein said repeating is effective to detect changes in the level of the light emission in the transgenic mouse over time.

47-48. (canceled)

49. (previously presented): A method of providing a transgenic mouse suitable for screening a selected analyte, comprising

generating a transgenic mouse of claim 38, and

providing said transgenic mouse or progeny thereof for use in screening a selected analyte.

50-64. (canceled)

65. (currently amended): The transgenic mouse of claim 38, ~~said panel~~ wherein the method further comprises ~~comprising~~

introducing a third expression cassette comprising a control element derived from a third stress-inducible gene into a mouse at an embryonic stage ~~selected from the group consisting of DNA dependent PK, DNA repair genes, GADD45, FOS, XHF, GADD153, TRE, p53RE response elements, JNK, p38, HO, GRP78, HSP70, metallothionein IIA (MTIIA), c jun (JUN),~~

~~FOS, heme oxygenase (HMO), cytochrome P450 1A1 (CYP1A1), glutathione S-transferase Ya subunit (GST Ya), aldehyde dehydrogenase (ALDH1), IL-1 alpha, IL-1 beta, TNF-alpha, G-CSF, GM-CSF, IL-3, IL-6, IL-8, IL-10, ICAM-1, tyrosine hydroxylase (TH), dopamine beta-hydroxylase (DBH), ornithine decarboxylase (ODC), and a gene containing a response element selected from the group consisting of thyroid hormone response element (ThRE), NFkBRE, XRE, retinoic acid response element (RARE), peroxisome proliferation response element (PPRE) and estrogen response element (ERE)~~, said third control element operably linked to sequences encoding a third light generating polypeptide and said third control element derived from a different stress-inducible gene than said first and second control elements.

66. (previously presented): The transgenic mouse of claim 65, wherein (i) said first, second, and third control elements are each derived from a different gene, and (ii) said first, second, and third light generating polypeptides produce the same color of light.

67. (previously presented): The transgenic mouse of claim 65, wherein (i) said first, second, and third control elements are each derived from a different gene, and (ii) at least two of said first, second, and third light generating polypeptides produce different colors of light.

68. (previously presented): The transgenic mouse of claim 65, said panel further comprising additional expression cassettes, wherein each expression cassette comprises a control element derived from a different stress-inducible gene, said control element operably linked to sequences encoding a light generating polypeptide.

69-79. (canceled)

80. (new): An ancestor of the transgenic mouse of claim 38.